

052-12K-1061
Maintain Plumbing Tools
Status: Approved

Distribution Restriction: Approved for public release; distribution is unlimited.

Destruction Notice: None

Foreign Disclosure: FD1 - This training product has been reviewed by the training developers in coordination with the Fort Leonard Wood foreign disclosure officer. This training product can be used to instruct international military students from all approved countries without restrictions.

Conditions: Given a mission to maintain plumbing tools, pipe fitters tool kit 2 1/2 to 4 inch, pipe-fitters tool kit 1/8 to 2 inch, lubricating oil, files, shop towels/rags, grinder, sand paper, Safety glasses/goggles, hearing protection, hard hat, and gloves. This task should not be trained in MOPP 4.

Standards: Maintain tools so they are clean and serviceable. Without injury to personnel or damage to equipment.

Special Conditions: None

Safety Risk: Low

MOPP 4: Never

Task Statements

Cue: Soldier is given a mission to maintain plumbing tools.

DANGER

None

WARNING

None

CAUTION

None

Remarks: Sequential performance is not required for this task.

Notes: - Tools found in poor condition should be immediately made rust free, cleaned, sharpened and stored correctly.

- For tools that have been stored incorrectly and have accumulated rust it may be necessary to clean these tools using oil, steel wool and emery cloth.

- All wooden components of tools should be stored with a light coat of Linseed oil.

Performance Steps

1. Maintain the measuring tapes.

- a. Keep the tapes clean and dry.
- b. Store the tapes where they will not become bent or damaged.

2. Maintain the cutting tools.

a. Maintain wood cutting blades.

- (1) File the saw teeth to keep them in top condition.
- (2) Use a wedge to spread the cut on a band saw. Do not force the saw.

b. Maintain the hacksaws.

- (1) Store the blades in a dry place. Apply a light coat of oil to the blades when not in use in order to avoid rusting.
- (2) Avoid placing heavy tools or objects on the saw blades as this can result in a distortion of the blade.
- (3) Adjust the wing nut to ensure proper tension of the blade.

c. Maintain the pipe threaders (Figure 052-248-1000-1).

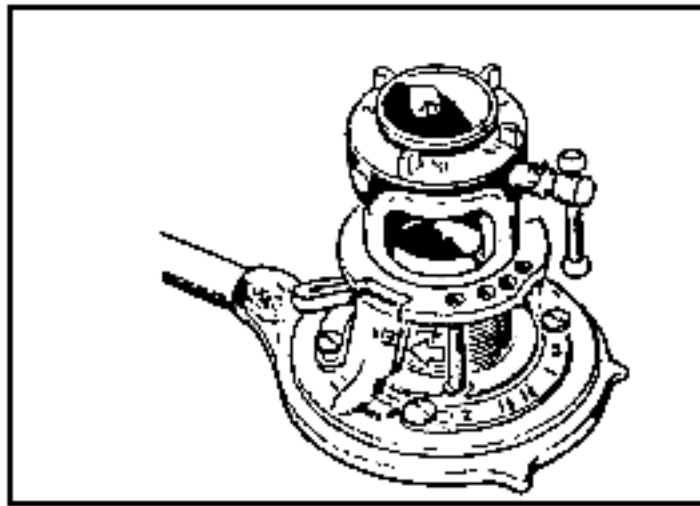


Figure 052-248-1000-1
Pipe Threader

- (1) Wipe off the excess cutting oil, and clean the metal shavings from the cutting-die edges and collar.
- (2) Store the pipe threaders in a case or box that will protect the cutting dies.

d. Maintain the pipe cutters (Figure 052-248-1000-2).

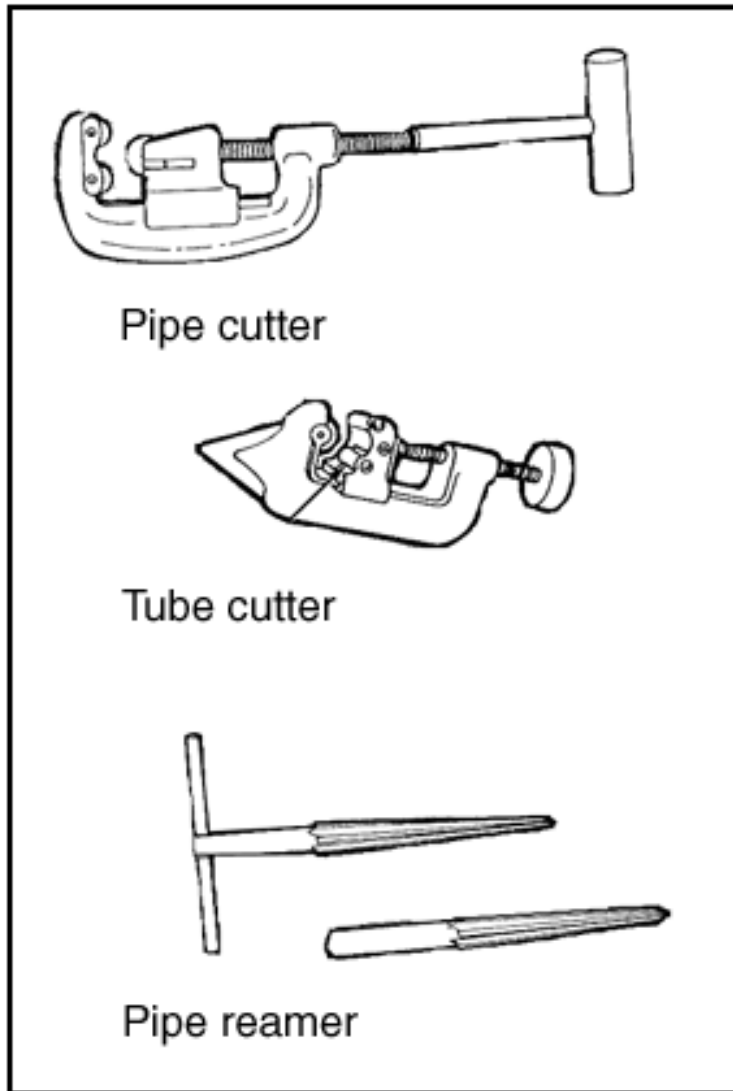


Figure 052-248-1000-2
Cutting Tools

- (1) Clean and lightly oil the cutter wheel, roller guide, and adjusting screw.
 - (2) Store on a rack or in a box that protects the cutting wheel.
- e. Maintain the tube cutter (Figure 052-248-1000-2).
- (1) Keep the cutting wheel clean and lightly oiled.
 - (2) Keep the reaming device retracted when not in use (if mounted on the body of the cutter).
 - (3) Store the tube cutters on a rack or in a box.
- f. Maintain the pipe reamer (Figure 052-248-1000-2).
- (1) Keep the pipe reamer clean to maintain accuracy.
 - (2) Replace the pipe reamer if it chatters when the proper pressure is applied during use.
 - (3) Hone the edges on an oilstone to restore the sharpness on slightly dulled edges. On an adjustable reamer, the blades may be replaced.
 - (4) Wrap the pipe reamer in an oily cloth, and keep it in a box in order to prevent damage during short-term storage.

Note: - When storing the pipe reamer for long periods of time, thoroughly clean and coat with a rust preventative compound. Wrap each reamer separately in an oiled cloth and store in a dry container.

3. Maintain the gripping tools.

a. Maintain the wrenches (Figure 052-248-1000-3).

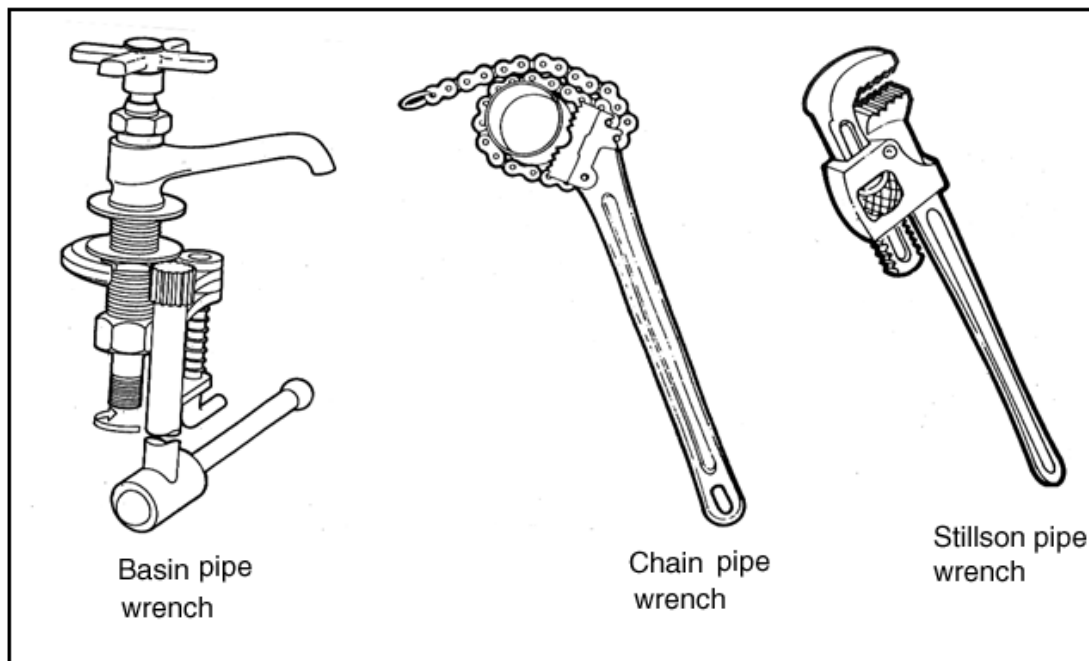


Figure 025-248-1000-3
Wrenches

(1) Apply a thin film of oil to the metal parts of the wrench before storing.

(2) Remove the oil before use in order to prevent injury or damage.

(3) Cover the wrench with a rust preventive compound, and carefully store in a dry location (for long-term storage).

b. Maintain the slip-joint pliers and the adjustable (monkey) wrench (Figure 052-248-1000-4). Remove dirt and grease with a clean rag, and apply a light coat of oil after each use.

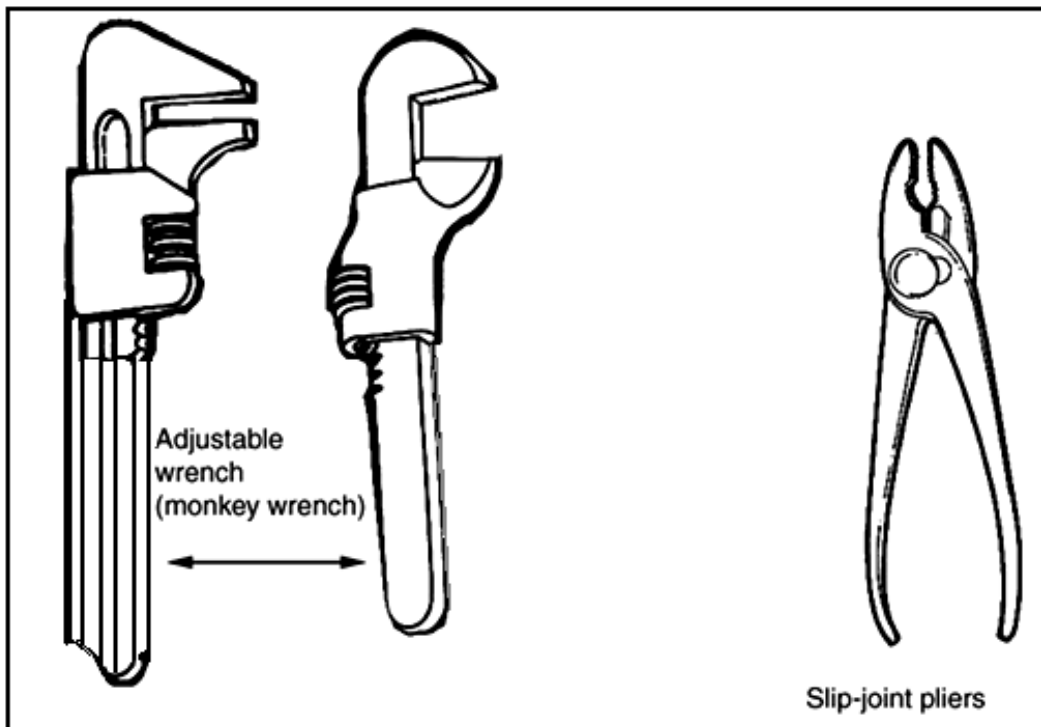


Figure 052-248-1000-4
Gripping Tools

c. Maintain the vise and pipe stand (Figure 052-248-1000-5).

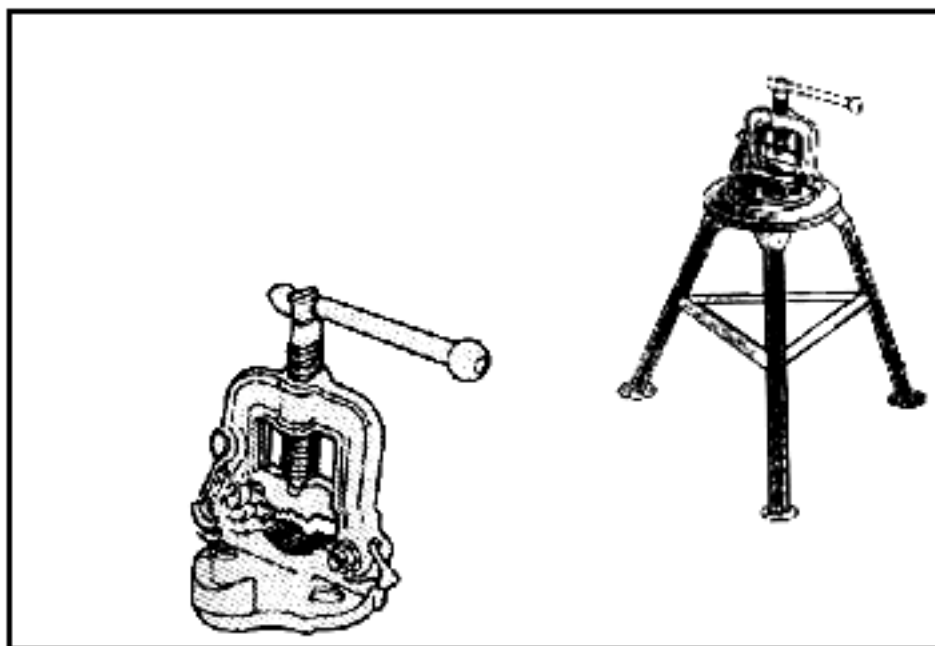


Figure 052-248-1000-5
Vise and Pipe Stand

(1) Clean with a rag after each use, and apply a light coat of oil.

Note: Never oil the swivel base or swivel joint, as this decreases its holding power.

(2) Bring the jaws lightly together, and leave the handle in a vertical position when not using the vise in order to protect the jaws.

4. Maintain the driving tools (Figure 052-248-1000-6).

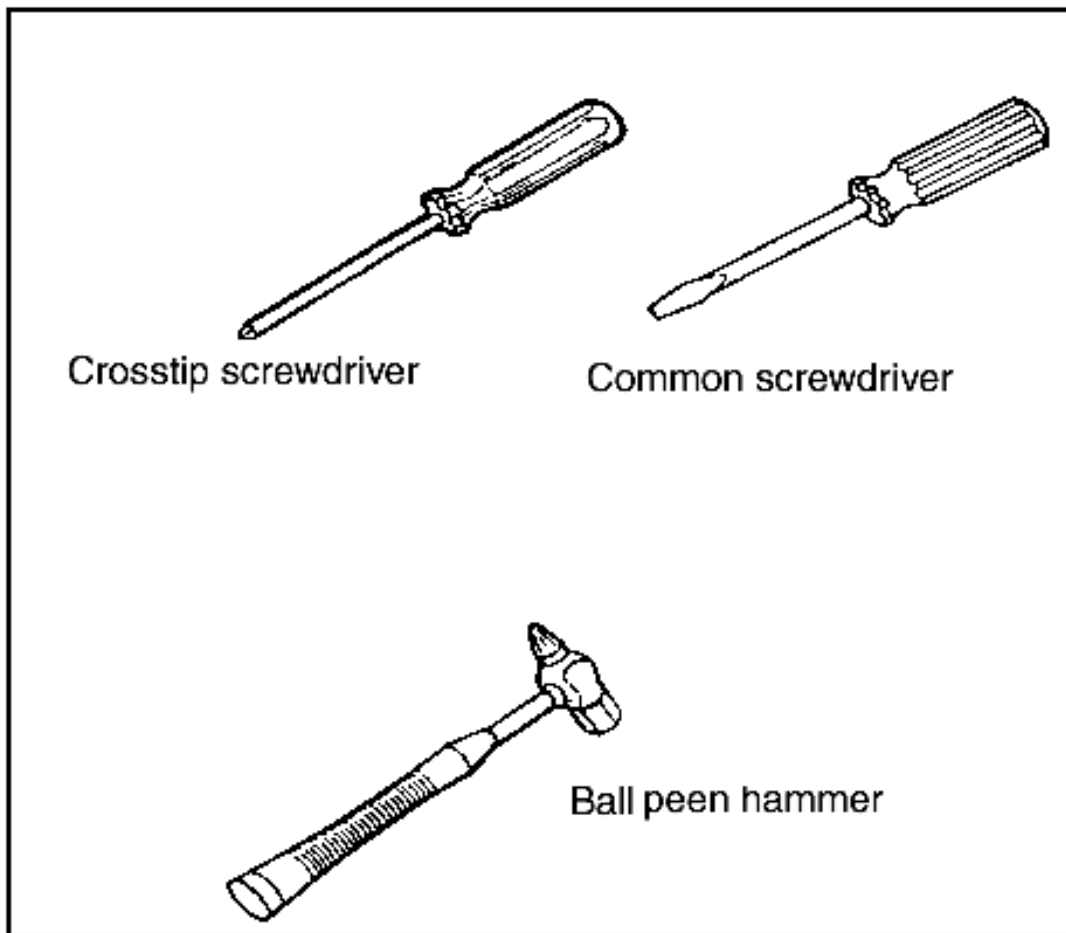


Figure 052-248-1000-6
Driving Tools

a. Maintain the screwdrivers.

(1) Wipe clean after each use.

(2) Apply a rust preventive compound to all metal surfaces, and store in a dry place (for long-term storage).

b. Maintain the ball peen hammer. Rub a small amount of linseed oil into the wood handles to prevent the wood from drying out and shrinking.

5. Maintain the soldering torch kit (Figure 052-248-1000-7). Wipe off the cooled torch head with a clean, dry cloth.

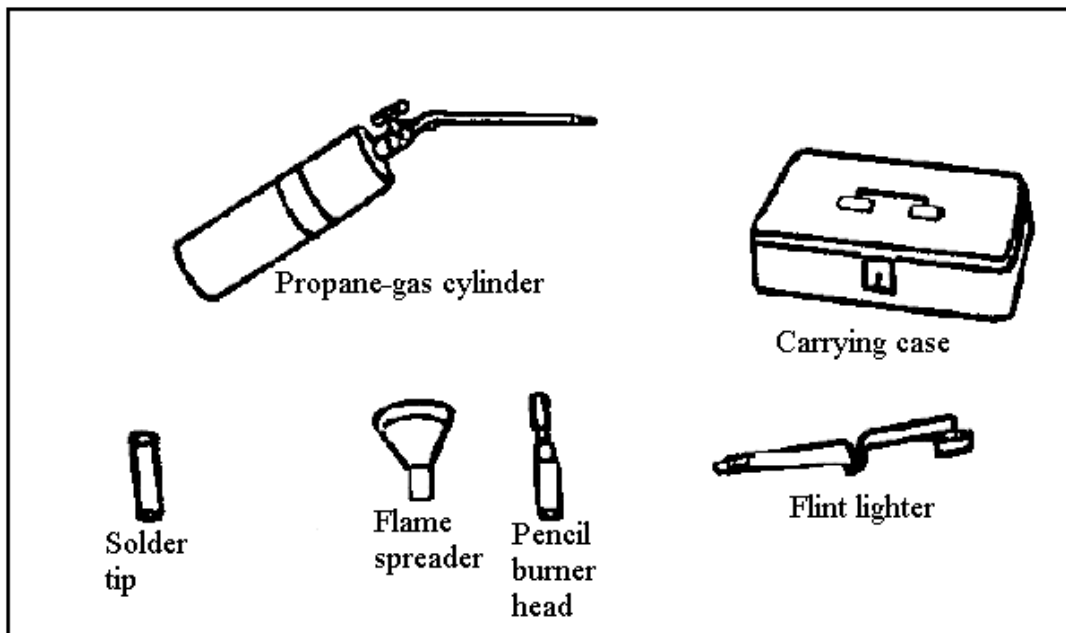


Figure 052-248-1000-7
Soldering Torch Kit

(Asterisks indicates a leader performance step.)

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show him how to do it correctly.

Evaluation Preparation: Setup: Provide the soldier with the items listed in the conditions. Brief soldier: Tell the soldier that he will be required to complete the performance measures according to the standards set forth in the task.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Maintained the measuring tapes.			
2. Maintained the cutting tools.			
3. Maintained the gripping tools.			
4. Maintained the driving tools.			
5. Maintained the soldering torch kit.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	TM 3-34.70	Plumbing, Pipe Fitting, and Sewerage	No	No
	TM 9-243	USE AND CARE OF HAND TOOLS AND MEASURING TOOLS (TO 32-1-101; M6290-AJ-MAN-1010; TM-10209-10/1) (REPRINTED W/BASIC INCL C1-2)	Yes	No

TADSS : None

Equipment Items (LIN):

LIN	Name
W48622	Tool Kit Pipefitters: 1/8 to 2 Inch Pipe
W48759	Tool Kit Pipefitters: 2-12 to 4 Inch Pipe
W34648	Tool Kit, Carpenters, Engineer Squad with Chest

Materiel Items (NSN) :

Step ID	NSN	LIN	Title	Qty
	5180-00-596-1501	W48622	Tool Kit Pipefitters, 1/8 to 2 Inch Pipe	1
	8415-00-268-7868	J68064	Gloves Leather: Men's Work Cream Color Strap Closure Gauntlet Cuff, Size 5	1
	4240-00-269-7912		Goggles, Industrial, Plastic, Polycarbonate Lens	1
	5110-00-245-3016		File, Hand, American Pattern, 14 Inches Long, Curved Tooth Type, Flexible, Milled Teeth, Standard Cut	1
1.	5180-00-596-1501	W48622	Tool Kit Pipefitters, 1/8 to 2 Inch Pipe	1
1.	8415-00-268-7868	J68064	Gloves Leather: Men's Work Cream Color Strap Closure Gauntlet Cuff, Size 5	1
1.	4240-00-269-7912		Goggles, Industrial, Plastic, Polycarbonate Lens	1
1.	5110-00-245-3016		File, Hand, American Pattern, 14 Inches Long, Curved Tooth Type, Flexible, Milled Teeth, Standard Cut	1

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to the current Environmental Considerations manual and the current GTA Environmental-related Risk Assessment card. Dispose of hazardous materials (such as cleaning solvents, empty adhesive cans, and contaminated rags) IAW unit Standing Operating Procedures and guidance from higher headquarters.

Safety: In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination. Soldiers should always use proper PPE when maintaining plumbing tools.

Prerequisite Individual Tasks : None

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
052-12K-1000	Test Water System	052 - Engineer (Individual)	Approved
052-12K-1064	Install a Water Closet With Tank	052 - Engineer (Individual)	Approved
052-12K-1062	Rough In a Gravity Flow Waste System	052 - Engineer (Individual)	Approved
052-248-2006	Bend Pipe (for Pipeline)	052 - Engineer (Individual)	Approved
052-12K-1050	Install A Lavatory	052 - Engineer (Individual)	Approved
052-12K-1012	Clear Waste System Stoppages	052 - Engineer (Individual)	Approved
052-248-2005	Install Pipeline (Underground)	052 - Engineer (Individual)	Approved
052-248-1056	Prepare a Plumbing-Materials Takeoff List	052 - Engineer (Individual)	Approved
052-248-1055	Install Cast-Iron Pipe	052 - Engineer (Individual)	Approved
052-248-2004	Emplace a Collapsible Tank	052 - Engineer (Individual)	Approved
052-248-2003	Emplace a Flexible Hose Line	052 - Engineer (Individual)	Approved
052-12K-1023	Install a Prefabricated Shower	052 - Engineer (Individual)	Approved
052-248-1043	Repair Steel, Plastic, and Copper Pipes	052 - Engineer (Individual)	Approved
052-248-1040	Interpret Plumbing Prints and Drawings	052 - Engineer (Individual)	Approved
052-248-1025	Winterize a Water System	052 - Engineer (Individual)	Approved
052-248-1028	Troubleshoot Faucets	052 - Engineer (Individual)	Approved
052-248-1029	Troubleshoot a Water Closet and Tank	052 - Engineer (Individual)	Approved
052-248-1024	Install a Drinking Fountain	052 - Engineer (Individual)	Approved
052-248-1016	Install Components With a Pumping Station	052 - Engineer (Individual)	Approved
052-248-1017	Repair a Flexible Hose Line	052 - Engineer (Individual)	Approved
052-248-1021	Identify Plumbing Materials	052 - Engineer (Individual)	Approved
052-248-1022	Install a Water Heater	052 - Engineer (Individual)	Approved
052-248-1010	Install Urinals	052 - Engineer (Individual)	Approved
052-248-1014	Repair a Coupled Pipeline	052 - Engineer (Individual)	Approved
052-248-1013	Install a Coupled Pipeline	052 - Engineer (Individual)	Approved

Supported Individual Tasks :

Task Number	Title	Proponent	Status
052-12K-1055	Install A Urinal	052 - Engineer (Individual)	Approved
052-12K-1006	Install Cross-Linked Polyethylene (PEX) Tubing	052 - Engineer (Individual)	Approved
052-248-1012	Clear Waste-System Stoppages	052 - Engineer (Individual)	Superseded
052-12K-1071	Rebuild a Gate Valve	052 - Engineer (Individual)	Approved
052-248-1007	Test Waste and Water Systems	052 - Engineer (Individual)	Superseded
052-248-1050	Install a Lavatory	052 - Engineer (Individual)	Superseded
052-12K-1005	Install Steel Pipe	052 - Engineer (Individual)	Approved
052-12K-1073	Repair Cast Iron Pipe	052 - Engineer (Individual)	Approved
052-248-1029	Troubleshoot a Water Closet and Tank	052 - Engineer (Individual)	Approved
052-248-1033	Prevent Backflow	052 - Engineer (Individual)	Superseded
052-248-1043	Repair Steel, Plastic, and Copper Pipes	052 - Engineer (Individual)	Approved
052-248-1055	Install Cast-Iron Pipe	052 - Engineer (Individual)	Approved
052-248-2004	Emplace a Collapsible Tank	052 - Engineer (Individual)	Approved
052-248-2005	Install Pipeline (Underground)	052 - Engineer (Individual)	Approved
052-248-2006	Bend Pipe (for Pipeline)	052 - Engineer (Individual)	Approved
052-12K-1025	Insulate a Water System	052 - Engineer (Individual)	Analysis
052-248-1022	Install a Water Heater	052 - Engineer (Individual)	Approved
052-248-1023	Install a Shower System	052 - Engineer (Individual)	Superseded
052-248-1024	Install a Drinking Fountain	052 - Engineer (Individual)	Approved
052-12K-1060	Repair A Cross-Linked Polyethylene (PEX) Tubing System	052 - Engineer (Individual)	Approved
052-12K-1022	Install a Hot Water Heater	052 - Engineer (Individual)	Approved
052-248-1028	Troubleshoot Faucets	052 - Engineer (Individual)	Approved
052-12K-1003	Install Copper Pipe	052 - Engineer (Individual)	Approved
052-12K-1050	Install A Lavatory	052 - Engineer (Individual)	Approved
052-12K-1064	Install a Water Closet With Tank	052 - Engineer (Individual)	Approved
052-12K-1012	Clear Waste System Stoppages	052 - Engineer (Individual)	Approved
052-12K-1033	Install a Check Valve	052 - Engineer (Individual)	Approved
052-12K-1062	Rough In a Gravity Flow Waste System	052 - Engineer (Individual)	Approved
052-248-1017	Repair a Flexible Hose Line	052 - Engineer (Individual)	Approved
052-248-1002	Install Steel, Plastic, and Copper Pipes	052 - Engineer (Individual)	Obsolete
052-12K-1004	Install Plastic Pipe	052 - Engineer (Individual)	Approved
052-248-1011	Repair Valves and Fixture-Control Devices	052 - Engineer (Individual)	Obsolete
052-12K-1024	Install a Drinking Fountain	052 - Engineer (Individual)	Analysis
052-12K-1070	Rebuild a Pressure Reducing Valve	052 - Engineer (Individual)	Approved
052-248-1010	Install Urinals	052 - Engineer (Individual)	Approved
052-12K-1072	Rebuild Flushometer Valve	052 - Engineer (Individual)	Approved
052-248-1014	Repair a Coupled Pipeline	052 - Engineer (Individual)	Approved
052-248-1016	Install Components With a Pumping Station	052 - Engineer (Individual)	Approved
	Created from Template from 052-12K-1003	052 - Engineer (Individual)	Proposed
052-12K-1075	Rebuild a Check Valve	052 - Engineer (Individual)	Approved

Supported Collective Tasks :

Task Number	Title	Proponent	Status
10-PLT-0202	Conduct Petroleum Pipeline Operating Platoon Operations during Offense, Defense, Stability, and Defense Support of Civil Authorities (DSCA) Operations	10 - Quartermaster (Collective)	Approved
05-PLT-5211	Construct a Water Distribution System	05 - Engineers (Collective)	Approved
10-GRP-0212(Step: 12.)	Conduct Petroleum Group Operations during Offense, Defense, Stability, and Defense Support of Civil Authorities (DSCA) Operations	10 - Quartermaster (Collective)	Approved
10-SEC-0227	Conduct Petroleum Service Support Section Operations	10 - Quartermaster (Collective)	Approved
05-PLT-5215	Install a Coupled Pipeline	05 - Engineers (Collective)	Approved
05-PLT-5210	Construct a Sewerage System	05 - Engineers (Collective)	Approved
42-CO-0268	Conduct Force Provider Company Operations during Offense, Defense, Stability, and Defense Support of Civil Authorities (DSCA) Operations	42 - Supply (Collective)	Approved

05-PLT-5230	Perform Preventive Maintenance on Building Systems	05 - Engineers (Collective)	Approved
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Knowledges : None

Skills : None

ICTL Data :

ICTL Title	Personnel Type	MOS Data
Created Ictl from: 12K10, Plumber, Skill Level 1	Enlisted	MOS: 12K, Skill Level: SL1, Duty Pos: KFW
12K10, Plumber, Skill Level 1	Enlisted	MOS: 12K, Skill Level: SL1, Duty Pos: KFW